OIPE
FEB 0 5 2004
PATENT & TRADEMARK OFFICE

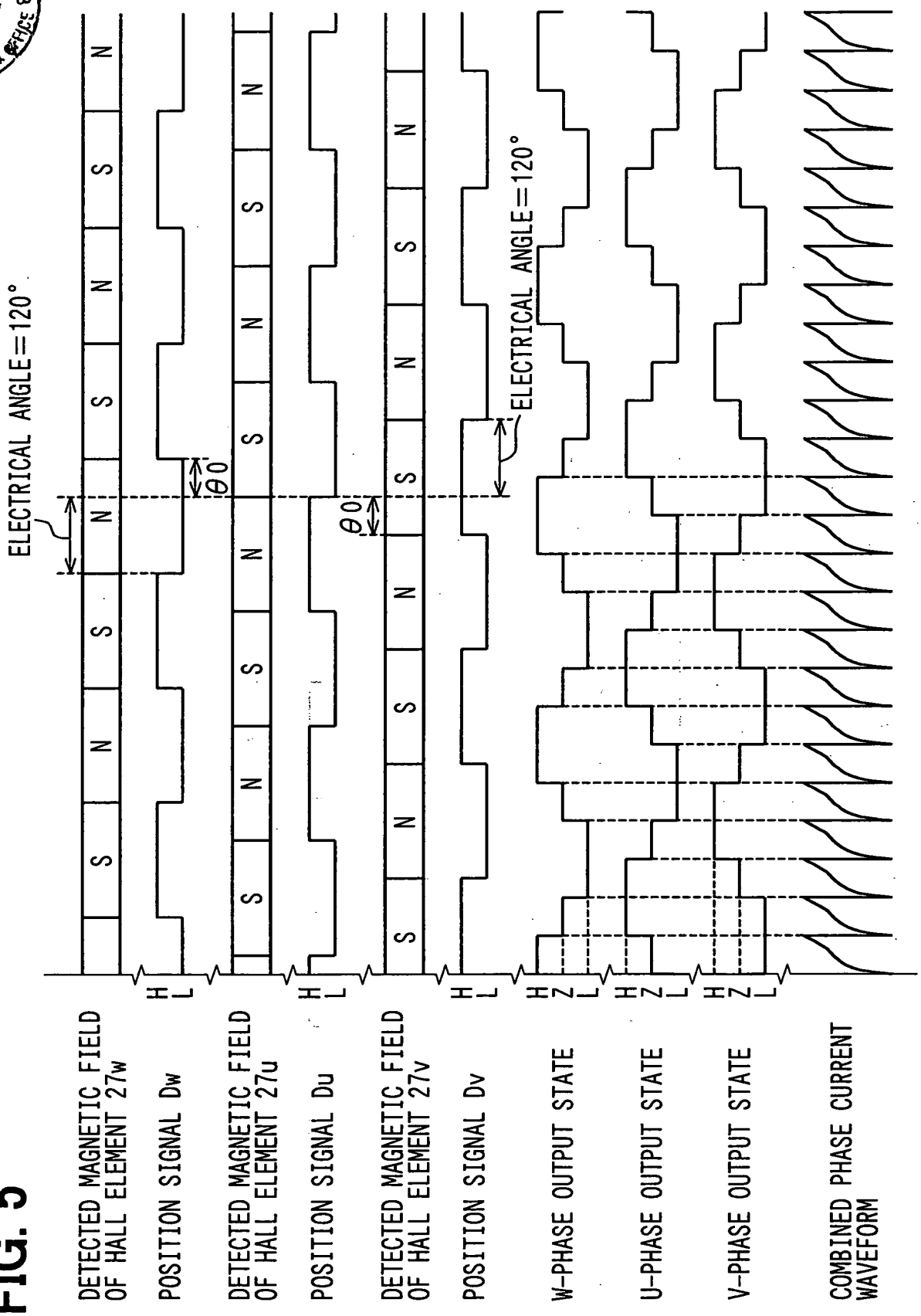

FIG. 5

FIG. 6

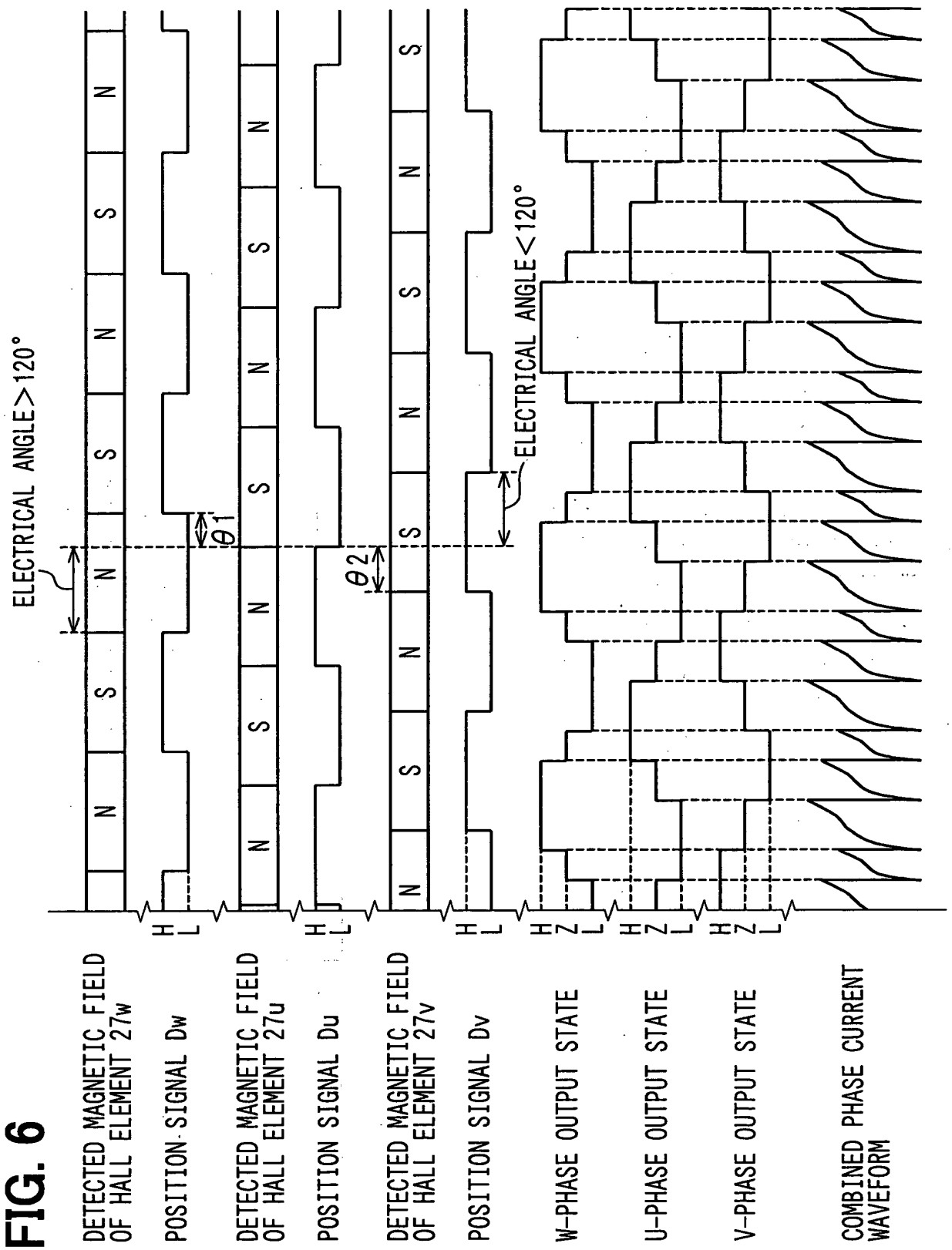
ELECTRICAL ANGLE>120°
ELECTRICAL ANGLE<120°
θ1
θ2
N
S
H
L
Z
DETECTED MAGNETIC FIELD OF HALL ELEMENT 27w
POSITION SIGNAL Dw
DETECTED MAGNETIC FIELD OF HALL ELEMENT 27u
POSITION SIGNAL Du
DETECTED MAGNETIC FIELD OF HALL ELEMENT 27v
POSITION SIGNAL Dv
W-PHASE OUTPUT STATE
U-PHASE OUTPUT STATE
V-PHASE OUTPUT STATE
COMBINED PHASE CURRENT WAVEFORM

FIG. 9 PRIOR ART

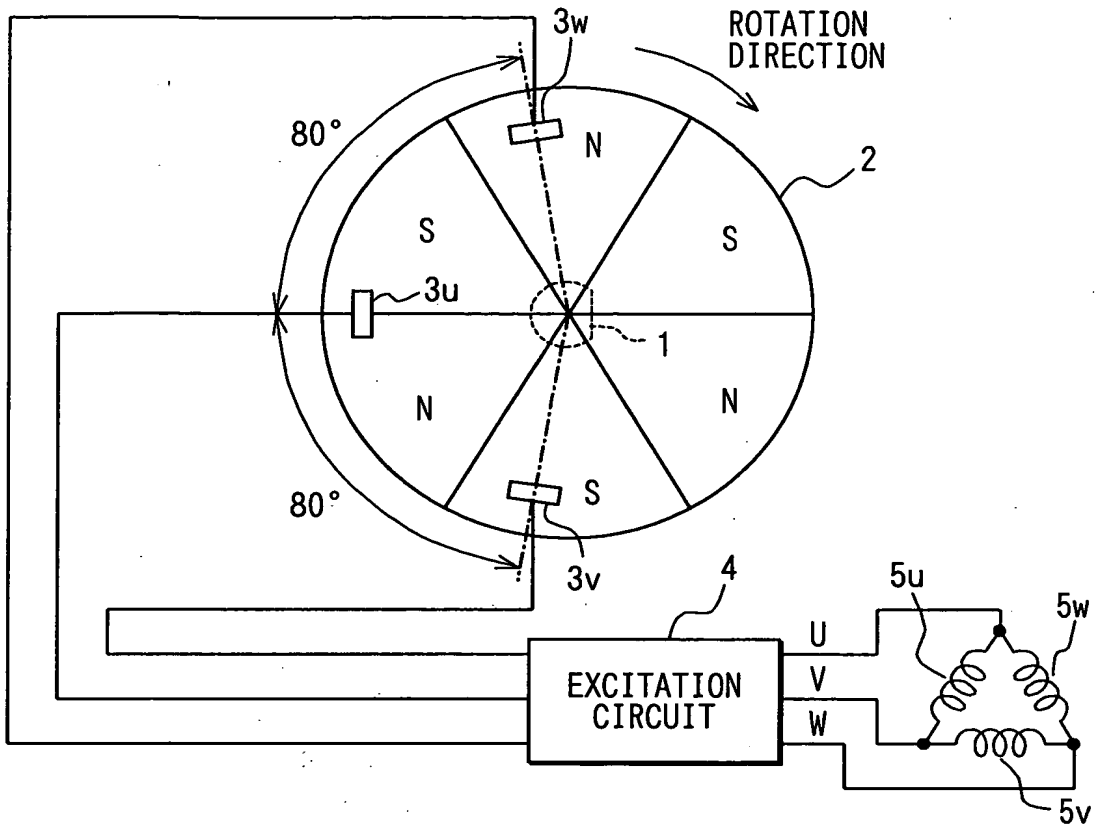

FIG. 10 PRIOR ART

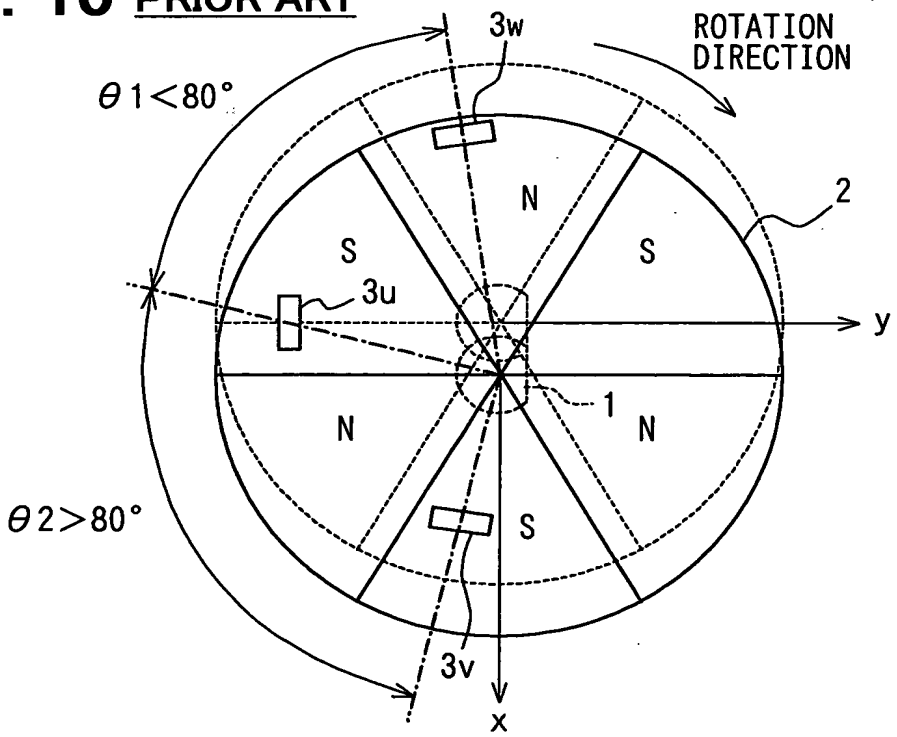
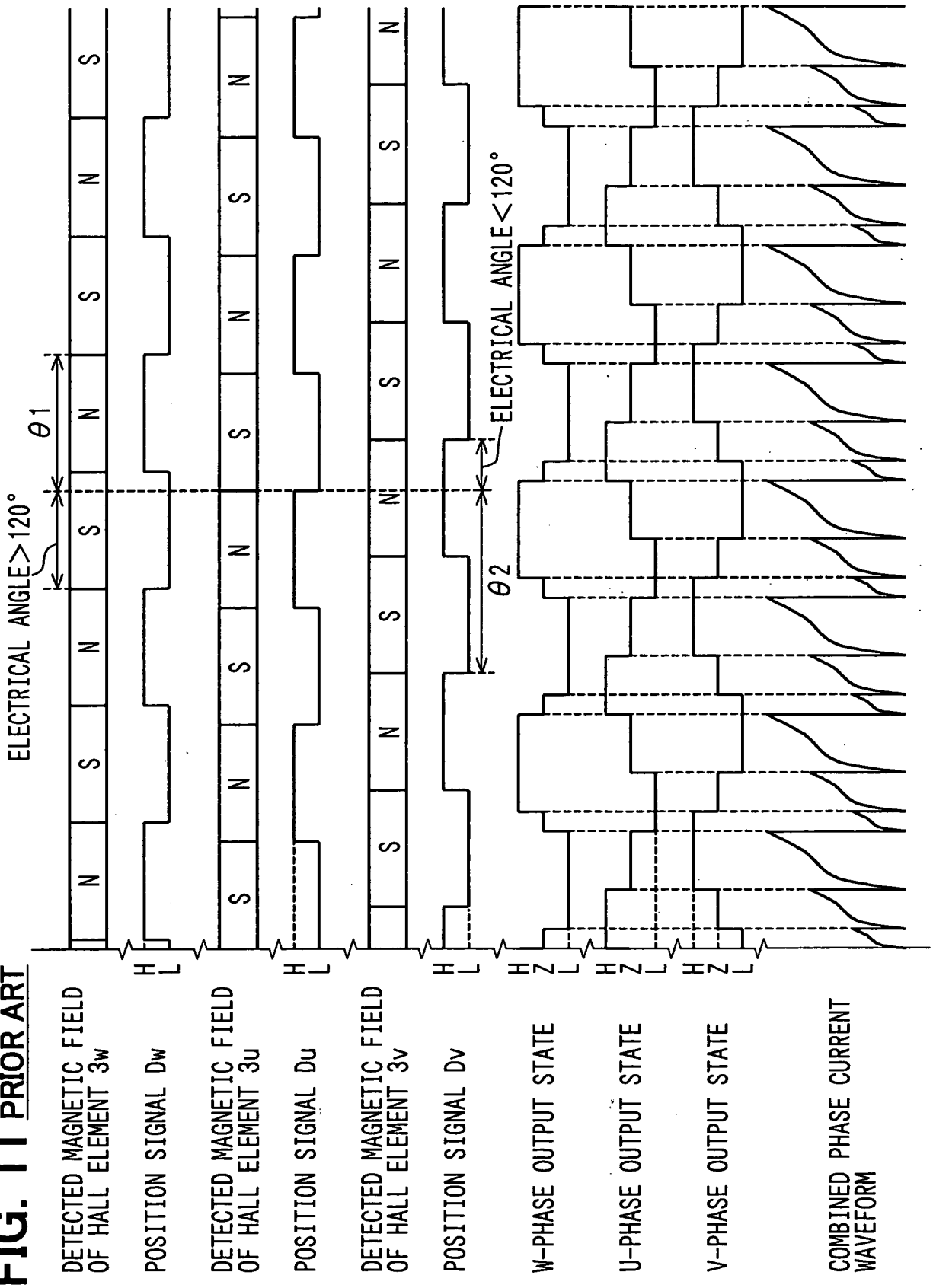
FIG. 11 PRIOR ART